Nixon Peabody LLP
Attorneys at Law

Suite 900
401 9th Street, N.W.
Washington, D.C. 20004-2128
(202) 585-8000

Fax: (202) 585-8080

FAX

To:	Company	Fax #:	Telephone #:
1) MAIL STOP AMENDMENT - Group Art Unit 1772	USPTO	571-273-8300	
2)			
3)			
4)			
5)			

INTERNATIONAL PHONE NUMBERS MUST INCLUDE COUNTRY & CITY CODE. SEE LOCAL WHITE PAGES FOR CODES NEEDED.

From: Thomas W. Cole	Date: February 3, 2006	No. of Pages: (including this page) 5	

Comments:

In re Patent Application of:
Takahiro KUME et al
Serial No. **10/642,280**
Filed: **August 18, 2003**
For: **POLISHING SHEET AND POLISHING WORK METHOD**

FILED HEREWITH: **Request for Reconsideration (in response to 11-3-05 OA)**

Original of the transmitted document will be sent by:

o First Class Mail o Overnight Mail o Hand Delivery o This transmission will be the only form of delivery of this document

IF YOU DO NOT RECEIVE ALL OF THESE PAGES, PLEASE CONTACT THE FAX OPERATOR AS SOON AS POSSIBLE AT: (202) 585-8000. THANK YOU.

CONFIRMATION: DATE SENT _____ TIME _____ BY _____

INTEROFFICE TO: o Albany o Boston o Buffalo o Florida o Garden City o Hartford o Los Angeles o Manchester o New York City o Northern Virginia o Orange County o Philadelphia o Providence o Rochester o San Francisco o Washington

To:	Company	Fax #:	Telephone #:
1) MAIL STOP AMENDMENT - Group Art Unit 1772	USPTO	571-273-8300	
2)			
3)			
4)			
5)			

INTERNATIONAL PHONE NUMBERS MUST INCLUDE COUNTRY & CITY CODE. SEE LOCAL WHITE PAGES FOR CODES NEEDED.

From: Thomas W. Cole	Date: February 3, 2006	No. of Pages: (including this page) 5	Client/Matter: 742158-8
User #: 8682	Ext: 8206	Disbursement Amount: $	

Docket No.: 742158-8

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	Confirmation No. 2447
Takahiro KUME et al	)	
Serial No. **10/642,280**	)	Group Art Unit: **1772**
Filed: **August 18, 2003**	)	Examiner: **A.A. Chevalier**
For: **POLISHING SHEET AND POLISHING WORK METHOD**	)	Dated: **February 3, 2006**

REQUEST FOR RECONSIDERATION

CERTIFICATE OF FAX TRANSMISSION
I hereby certify that this correspondence is being facsimile transmitted to the USPTO at 571-273-8300, on 2-3-06
Linda Swink

MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed November 3, 2005, Applicants respectfully traverse the rejection of claims 1-18, and 21-22 under 35 U.S.C. §112, first paragraph. To the contrary, every new limitation added to independent claims 1 and 8 is amply and expressly supported in the originally filed specification, as detailed below.

Claim 1, as amended on July 14, 2005, recites the invention as follows:

> "1. A polishing sheet having an elastic plastic foam sheet containing fine particles, wherein the elastic plastic foam sheet has a fine foam structure (A) including fine foam cells formed at a polishing face thereof (B) in part by separating off the fine particles, (C) wherein said fine foam cells reserve a polishing liquid containing abrasive particles, (D) and the elastic plastic foam sheet has large foam cells that have diameters substantially larger on average than those of the fine foam cells in an interior thereof (E) and that reserve polishing liquid containing abrasive particles, (F) and wherein communication holes are formed between the large foam cells and the fine foam cells."

Portion (A) of claim 1 is supported by the penultimate sentence of paragraph [0024] as follows:

"... fine foams 4 dispersed generally evenly are formed in the polyurethane resin." (Emphasis Added.)

The cells forming the fine foams 4 in [0024] and illustrated in Fig. 1 correspond to the recited "fine foam cells".

Portion (B) of claim 1 is supported by paragraphs [0024], [0025], [0038] and Fig. 1: " ... fine foams 4 dispersed generally evenly are formed in the polyurethane resin" ([0024]); "Fine particles 5 added at a time of manufacturing the polyurethane sheet 2 are contained in some of the fine foams 4" ([0025)]; and "As shown in Fig. 2, in the dummy polishing process, all the fine particles positioned at the polishing faces P of the two upper and lower polishing pads 1 and in the vicinity of the inner wall faces of the cells 3 are separated off from the fine foams 4 ..., and new fine openings of the fine foams 4 which can reserve and allow the polishing liquid to move are formed in addition of the openings of the fine foams 4 ..." ([0038]) (Emphasis added.) Thus, all the fine particles positioned at the polishing faces P are separated off from the fine foams 4. Accordingly, the polishing sheet having the elastic plastic foam sheet containing the fine particles has the fine foam structure formed at the polishing face thereof in part by separating off of the fine particles.

Portion (C) above is supported by paragraphs [0039] and [0040] as follows: "a slurry-like polishing liquid 35 including abrasive particles is supplied between the polishing pads ..." ([0039]). "... [T]he polishing liquid containing the abrasive particles is reserved inside the fine foams 4 and the cells 3, and it is movable through the communication holes formed in the network manner." (Emphasis added.) Accordingly, it is evident that the fine foam cells reserve the polishing liquid containing abrasive particles.

Portion (D) is supported by paragraphs [0024, [0030] and Fig. 1: "When the DMF is removed from the resin emulsion in water, relatively large cells 3 are formed ... Further, when the DMF is separated into water, fine foams 4 are formed in the polyurethane resin in a continuous foaming manner." ([0030]). "The polyurethane sheet 2 is formed with large cells (pores) 3 with a generally triangular section, which are founded along a direction of a thickness thereof. ... Polyurethane resin exists in a manner of a partition wall between adjacent cells 3, and fine foams in a manner of a partition wall between adjacent cells 3, and fine foams 4 dispersed generally evenly are formed in the polyurethane resin." ([0024]).

Because the fine foams 4 are dispersed generally evenly at the partition wall, in a case that the average diameter of the fine foams 4 is larger than that of the cells 3, the polyurethane sheet 2 cannot retain its shape due to the large fine foams 4. (The polyurethane sheet 2 does not function as the polishing sheet.) Fig. 1 shows clearly that the elastic plastic foam sheet has large foam cells 3 that have diameters substantially larger on average than those of the fine foam cells 4 in an interior thereof.

Portion (E) is supported by paragraph [0040] in the same manner as portion (C) (see underlined quote).

Portion (F) is supported by paragraphs [0024] and [0040]: "These fine foams 4 mutually connect 3-dimensionally in a network manner through fine communication holes (not shown). Therefore, the polyurethane sheet 2 is constituted as a continuously foamed body of polyurethane." ([0024]). "For this reason, in the polishing process, the polishing work is conducted to the aluminum base plate 40 such that the abrasive particles contained in the polishing liquid can move between the fine foams 4 and the cells 3 through the communication holes ..." ([0040]). Accordingly, communication holes are formed between the large foam cells 3 and the fine foam cells 4.

Amended claim 8 is supported by the specification as originally filed in the same manner as amended claim 1. Hence, both independent claims 1 and 8 are fully and expressly supported by the originally- filed specification.

The amendments to claims 7 and 18 are supported by paragraphs [0038] and [0028]. These claims were amended from "abrasive particles of at least one kind selected from ..." to --particles of at least one kind selected from ...--. "As shown in Fig. 2, in the dummy polishing process, all the fine particles positioned at the polishing faces P of the two upper and lower polishing pads 1 and in the vicinity of the inner wall faces of the cells 3 are separated off from the fine foams 4 ..." ([0038]). Accordingly, in the polishing work process, the fine particles 5 do not function as the abrasive particles. "As the fine particles 5, fine particles which have neither compatibility with polyurethane resin solution nor bonding property with a polyurethane resin ..." ([0028]). Because the fine particles are not

necessarily limited to the abrasive particles, the scopes of claims 7 and 18 were broadened in the Amendment filed July 14, 2005.

The amendment to claim 14 is supported by paragraph [0040]: "For this reason, in the polishing process, the polishing work is conducted to the aluminum base plate 40 such that the abrasive particles contained in the polishing liquid can move between the fine foams 4 and the cells 3 through the communication holes ..." Accordingly, it is apparent that each of the communication holes has the diameter larger than those of abrasive particles since the communication holes allow the abrasive particles to move. In claim 14, some terms were deleted because the terms were inserted in claim 1.

New claims 21 and 22 are supported by paragraphs [0024] and [0030] in the same manner as discussed with respect to part (D) of amended claim 1.

The subject mater of each amended claim is well supported by the specification as originally filed in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §112, first paragraph, is respectfully requested.

Now that all the claims are allowable, the prompt issuance of a Notice of Allowability is earnestly solicited.

The Commissioner is authorized to charge any overage or shortage of fees connected with filing of this Amendment to Deposit Account No. 19-2380.

Respectfully submitted,

Thomas W. Cole
Registration No. 28,290

NIXON PEABODY LLP
Customer No. 22204
401 9th Street, N.W.
Suite 900
Washington, DC 20004-2128
(202) 585-8000; fax (202) 585-8080